

G1:C,P

G2:Cb,Hy,Ak

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 9:CLASS 11:CLASS
12:CLASS

L1 STRUCTURE UPLOADED

=> d his

(FILE 'HOME' ENTERED AT 12:08:40 ON 23 AUG 2009)

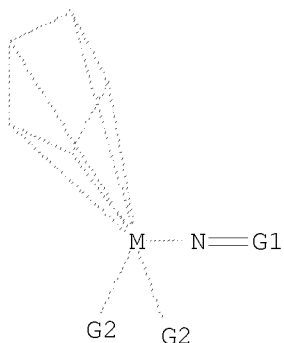
FILE 'REGISTRY' ENTERED AT 12:09:07 ON 23 AUG 2009

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 C,P

G2 Cb,Hy,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 12:10:09 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 24457 TO ITERATE

8.2% PROCESSED 2000 ITERATIONS

0 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 479778 TO 498502

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 12:10:15 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 486453 TO ITERATE

100.0% PROCESSED 486453 ITERATIONS 286 ANSWERS
SEARCH TIME: 00.00.05

L3 286 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	186.36	186.58

FILE 'CAPLUS' ENTERED AT 12:10:29 ON 23 AUG 2009
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FILE COVERS 1907 - 23 Aug 2009 VOL 151 ISS 9
FILE LAST UPDATED: 21 Aug 2009 (20090821/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

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The ALL, BIB, MAX, and STD display formats in the CA/CAplus family of databases have been updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 9.

=> s 13

L4 135 L3

=> s 14 and py<=2004

25141431 PY<=2004

L5 112 L4 AND PY<=2004

=> s 15 and imine

24870 IMINE

L6 4 L5 AND IMINE

=> d 1-4 bib abs

L6 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2004:474653 CAPLUS
 DN 141:431312
 TI Synthesis and Characterization of Metal Carbonyl Complexes of $M(CO)_6$ ($M = Cr, Mo, \text{ and } W$), $Re(CO)_5Br$, and $Mn(CO)_3Cp$ with Acetone
 methanesulfonylhydrazone (amsh) and Methanesulfonylhydrazine (msh)
 AU Oezdemir, Uemmuehan; Karacan, Nurcan; Sentuerk, Ozan Sanli; Sert, Sema;
 Ugur, Fadime
 CS Department of Chemistry, Faculty of Science and Literature, Gazi
 University, Ankara, Turk.
 SO Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry (2004), 34(6), 1057-1067
 CODEN: SRIMCN; ISSN: 0094-5714
 PB Marcel Dekker, Inc.
 DT Journal
 LA English
 OS CASREACT 141:431312
 AB Ten new complexes, $[M(CO)_5(amsh)]$ [$M = Cr$ (1a), Mo (2a), W (3a)], $[Re(CO)_4Br(amsh)]$ (4a), and $[Mn(CO)_2(amsh)Cp]$ (5a) and $[M(CO)_5(msh)]$ [$M = Cr$ (1b), Mo (2b), W (3b)], $[Re(CO)_4Br(msh)]$ (4b), and $[Mn(CO)_3(msh)]$ (5b), were synthesized by the photochem. reaction of the metal carbonyls $[M(CO)_6]$ ($M = Cr, Mo, \text{ and } W$), $[Re(CO)_5Br]$, and $[Mn(CO)_3Cp]$ with acetone methanesulfonylhydrazone (amsh) and methanesulfonylhydrazine (msh). The complexes were characterized by elemental analyses, mass spectrometry, FTIR and 1H NMR spectroscopy. The spectroscopic studies show that amsh and msh behave as a monodentate ligands coordinating via an imine N donor atom in (1a)-(5a) and a hydrazine N donor atom in (1b)-(5b).
 RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1998:591640 CAPLUS
 DN 129:302503
 OREF 129:61707a,61710a
 TI Catalytic Preparation of Aziridines with an Iron Lewis Acid
 AU Mayer, Michael F.; Hossain, M. Mahmud
 CS Department of Chemistry, University of Wisconsin-Milwaukee, Milwaukee, WI, 53201, USA
 SO Journal of Organic Chemistry (1998), 63(20), 6839-6844
 CODEN: JOCEAH; ISSN: 0022-3263
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 129:302503
 AB The iron Lewis acid, $[(\eta^5-C_5H_5)Fe(CO)_2(THF)]+[BF_4]^-$, was found to be an effective catalyst for the preparation of aziridines. This new method provides a facile, one-step route to predominantly cis-aziridines, with yields up to 95%, from compds. with a diazo functionality and a variety of substituted N-benzylidene imines with N-aryl or N-alkyl groups. The reaction mechanism is believed to proceed through an electrophilic iminium ion intermediate. To support this idea, the iron Lewis acid-imine complex $[(\eta^5-C_5H_5)Fe(CO)_2(PhCH:NPh)]+[BF_4]^-$ was prepared, characterized, and reacted with different diazo compds. to provide the resultant cis-aziridines. Alternatively, it may be possible that the aziridines were derived from an electrophilic carbenoid intermediate, as is often proposed. Thus, the iron carbene $[(\eta^5-C_5H_5)Fe(CO)_2(CHPh)]+[SO_3CF_3]^-$ was prepared and treated with N-benzylideneaniline; however, the resultant aziridine was not formed.
 OSC.G 58 THERE ARE 58 CAPLUS RECORDS THAT CITE THIS RECORD (60 CITINGS)
 RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1980:446802 CAPLUS
 DN 93:46802
 OREF 93:7747a,7750a
 TI Reactions of phosphorus ylides with transition metal compounds. IX.
 Complexes with unsymmetrically substituted imines
 AU Knoll, L.
 CS Anorg.-Chem. Inst., Univ. Koeln, Cologne, 5000/41, Fed. Rep. Ger.
 SO Journal of Organometallic Chemistry (1980), 186(2), C42-C44
 CODEN: JORCAI; ISSN: 0022-328X
 DT Journal
 LA German
 AB Reaction of $\eta^5\text{-MeC}_5\text{H}_4\text{Mn(CO)}_2\text{(NCC}_6\text{H}_4\text{Me-p)}$ with $\text{PhMe}_2\text{P:CH}_2$ in ether at
 20° gave cis- and trans- $\eta^5\text{-MeC}_5\text{H}_4\text{Mn(CO)}_2\text{NH:C(C}_6\text{H}_4\text{Me-}$
 p)CH:PPhMe_2 , which was hydrolyzed to give
 trans- $\eta^5\text{-MeC}_5\text{H}_4\text{Mn(CO)}_2\text{NH:CMe(C}_6\text{H}_4\text{Me-p)}$.
 OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1974:552372 CAPLUS
 DN 81:152372
 OREF 81:23761a,23764a
 TI Ketimine complexes from 1-diazo-1-phenylethane
 AU Herrmann, Wolfgang A.
 CS Fachbereich Chem., Univ. Regensburg, Regensburg, Fed. Rep. Ger.
 SO Chemische Berichte (1974), 107(9), 2899-2904
 CODEN: CHBEAM; ISSN: 0009-2940
 DT Journal
 LA German
 GI For diagram(s), see printed CA Issue.
 AB N_2CMePh reacted with $\text{MnL(CO)}_2\cdot\text{THF}$ (L = cyclopentadienyl and
 methylcyclopentadienyl) to give the Mn acetophenone imine
 complexes I (R = H and Me, resp.), the configuration of which was
 indicated by ir, PMR, and mass spectra. PhMeC:NN:CMePh was formed as
 by-product but the expected carbene complexes were not obtained.
 OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

=> s 15 and Group 4
 1888950 GROUP
 6233889 4
 9500 GROUP 4
 (GROUP(W)4)
 L7 6 L5 AND GROUP 4

=> d 1-6 bib abs

L7 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2008:1501022 CAPLUS
 DN 150:35809
 TI Hydrocarbyl phosphinimine/cyclopentadienyl complexes of group
 4 and their use in olefin polymerization
 IN Von Haken Spence, Rupert Edward; Stephan, Douglas W.; Brown, Stephen John;
 Jeremic, Dusan; Wurcz, Ryan Paul
 PA Nova Chemicals Corporation, Can.
 SO Can., 79pp.
 CODEN: CAXXA4
 DT Patent
 LA English
 FAN.CNT 2
 PATENT NO. KIND DATE APPLICATION NO. DATE

PI	CA 2282070	C	20081209	CA 1999-2282070	19990910 <--
	CA 2282070	A1	20010310		
	WO 2001019512	A1	20010322	WO 2000-CA978	20000824 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BG, BR, BY, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IN, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MX, NO, NZ, PL, PT, RO, RU, SD, SG, SI, SK, TJ, TM, TR, UA, US, UZ, VN, YU, ZA, ZW, MD				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1214146	A1	20020619	EP 2000-954231	20000824 <--
	EP 1214146	B1	20031015		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	BR 2000013870	A	20020723	BR 2000-13870	20000824 <--
	JP 2003509388	T	20030311	JP 2001-523129	20000824 <--
	AT 251945	T	20031115	AT 2000-954231	20000824 <--
	ES 2208398	T3	20040616	ES 2000-954231	20000824 <--
	US 6440890	B1	20020827	US 2000-656126	20000906 <--
	IN 2002KN00348	A	20060113	IN 2002-KN348	20020313
PRAI	CA 1999-2282070	A	19990910		
	WO 2000-CA978	W	20000824		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Group 4 organometallic complexes are characterized by having a phosphinimine ligand and two or more cyclopentadienyl ligands. Certain of these complexes exhibit unusual behavior when examined by NMR techniques. Well defined crystals of the inventive complexes have been isolated and analyzed by x-ray crystallog. The complexes have also been found to be polymerization catalysts which are surprisingly more active than their simple metallocene analogs. Thus, CpTi(NP-t-Bu₃)Cl₂ 0.5000 g and Li(indenyl) 0.366 g were reacted to give a catalyst Cp(indenyl)₂Ti(NP-t-Bu₃), 2.3 + 10⁻⁶ mol/L of which with Ph₃CB(c₆F₄)₄ (B/T = 1.00) was used for ethylene polymerization to give 98.7% conversion at 160°.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L7 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:888784 CAPLUS

DN 137:370811

TI Solution polymerization process process for preparing

ethylene- α -olefin copolymer with broad molecular weight distribution

IN Brown, Stephen John; Swabey, William John; Dobbin, Christopher John Brooke

PA Nova Chemicals (International) S.A., Switz.

SO PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002092649	A2	20021121	WO 2002-CA558	20020423 <--
	WO 2002092649	A3	20030116		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

CA 2347410	A1	20021111	CA 2001-2347410	20010511 <--
US 20030004288	A1	20030102	US 2002-124465	20020417 <--
US 6777509	B2	20040817		
AU 2002311115	A1	20021125	AU 2002-311115	20020423 <--
PRAI CA 2001-2347410	A	20010511		
WO 2002-CA558	W	20020423		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 137:370811

AB The process comprises polymerizing ethylene and ≥ 1 C3-40 α -olefin (e.g., 1-octene) under medium pressure solution polymerization conditions at 170-300° in the presence of a catalyst system comprising (1) an organometallic catalyst containing a group 4 metal, ≥ 1 phosphinimine ligand and ≥ 1 activatable ligand [e.g., cyclopentadienyl titanium (tri-tert-butylphosphinimine) dichloride]; (2) a four coordinate boron activator (e.g., trityl borate); and (3) ≥ 1 trialkylaluminum (e.g., trimethylaluminum) to form a copolymer with mol. weight distribution > 2.0 . The polyethylene product produced by the process is desirable because it can provide enhanced "processability" in comparison to polyethylene having a narrow mol. weight distribution.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:208170 CAPLUS

DN 134:237973

TI Hydrocarbyl phosphinimine/cyclopentadienyl complexes of group 4 and their use in olefin polymerization

IN Von Haken Spence, Rupert Edward; Brown, Stephen John; Wurz, Ryan Paul; Jeremic, Dusan; Stephan, Douglas W.

PA Nova Chemicals (International) S.A., Switz.

SO PCT Int. Appl., 81 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001019512	A1	20010322	WO 2000-CA978	20000824 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BG, BR, BY, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IN, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MX, NO, NZ, PL, PT, RO, RU, SD, SG, SI, SK, TJ, TM, TR, UA, US, UZ, VN, YU, ZA, ZW, MD				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2282070	C	20081209	CA 1999-2282070	19990910 <--
	CA 2282070	A1	20010310		
	EP 1214146	A1	20020619	EP 2000-954231	20000824 <--
	EP 1214146	B1	20031015		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	BR 2000013870	A	20020723	BR 2000-13870	20000824 <--
	JP 2003509388	T	20030311	JP 2001-523129	20000824 <--
	AT 251945	T	20031115	AT 2000-954231	20000824 <--
	IN 2002KN00348	A	20060113	IN 2002-KN348	20020313
PRAI	CA 1999-2282070	A	19990910		
	WO 2000-CA978	W	20000824		

OS MARPAT 134:237973

AB Group IV organometallic complexes having a phosphinimine ligand and ≥ 2 cyclopentadienyl ligands are characterized, which are polymerization catalysts more active than their simple metallocene analogs. Thus,

CpTi(NP-t-Bu3)Cl2 0.5000 g and Li(indenyl) 0.366 g were reacted to give a catalyst Cp(indenyl)2Ti(NP-t-Bu3), 2.3X10⁻⁶ mol/L of which with Ph3CB(c6F4)4 (B/T=1.00) was used for ethylene polymerization to give 98.7% conversion at 160°.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2000:384263 CAPLUS

DN 133:31045

TI Organometallic complexes containing nitrogen-substituted phosphinimine ligand as olefin polymerization catalysts

IN Von Haken Spence, Rupert Edward; Koch, Linda; Jeremic, Dusan; Brown, Stephen John

PA Nova Chemicals (International) S.A., Switz.

SO PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000032653	A1	20000608	WO 1999-CA1016	19991101 <--
	W:			AE, AL, AM, AT, AU, AZ, BA, BG, BR, BY, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IN, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MX, NO, NZ, PL, PT, RO, RU, SD, SG, SI, SK, TJ, TM, TR, UA, US, UZ, VN, YU, ZA, ZW, MD	
	RW:			GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
	CA 2254841	A1	20000526	CA 1998-2254841	19981126 <--
	CA 2254841	C	20070206		
	AU 9964573	A	20000619	AU 1999-64573	19991101 <--
	EP 1135421	A1	20010926	EP 1999-952203	19991101 <--
	EP 1135421	B1	20080702		
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY	
	AT 399800	T	20080715	AT 1999-952203	19991101
	US 6234950	B1	20010522	US 1999-439767	19991115 <--
PRAI	CA 1998-2254841	A	19981126		
	WO 1999-CA1016	W	19991101		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 133:31045

AB An organometallic complex of a Group 4 metal having a cyclopentadienyl ligand and a heterosubstituted phosphinimine ligand is a catalyst component for olefin polymerization The heterosubstituted phosphinimine ligand may be conveniently and inexpensively synthesized using readily available precursors which are comparatively non-pyrophoric. The resulting catalysts are highly active for ethylene copolymn., particularly when activated with an aluminoxane or ionic activator.

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1999:216950 CAPLUS

DN 130:252798

TI Catalyst having a ketimide ligand for olefin polymerization

IN McMeeking, John; Gao, Xiaoliang; von Haken Spence, Rupert Edward; Brown, Stephen John; Jeremic, Dusan

PA Nova Chemicals (International) S.A., Switz.
 SO PCT Int. Appl., 36 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9914250	A1	19990325	WO 1998-CA839	19980903 <--
	W: AL, AM, AT, AU, AZ, BA, BG, BR, BY, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MX, NO, NZ, PL, PT, RO, RU, SD, SG, SI, SK, TJ, TM, TR, UA, US, UZ, VN, YU, ZW, MD				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2215444	C	19990315	CA 1997-2215444	19970915 <--
	CA 2215444	A1	19990315		
	US 6114481	A	20000905	US 1998-140608	19980826 <--
	AU 9889700	A	19990405	AU 1998-89700	19980903 <--
	EP 1021470	A1	20000726	EP 1998-941200	19980903 <--
	EP 1021470	B1	20021204		
	R: AT, BE, DE, DK, ES, FR, GB, IT, NL, SE, FI				
	JP 2001516776	T	20011002	JP 2000-511797	19980903 <--
	JP 4245801	B2	20090402		
	AT 229042	T	20021215	AT 1998-941200	19980903 <--
	ES 2188000	T3	20030616	ES 1998-941200	19980903 <--
	CN 1210312	C	20050713	CN 1998-809072	19980903
	US 6420300	B1	20020716	US 2000-616198	20000714 <--
	IN 2004KO00358	A	20060609	IN 2004-KO358	20040625
PRAI	CA 1997-2215444	A	19970915		
	IN 1998-CA1510	A3	19980824		
	US 1998-140608	A3	19980826		
	WO 1998-CA839	W	19980903		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 130:252798

AB A catalyst system for olefin polymerization comprises an organometallic complex of a group 4 metal having a ketimide ligand. One of the preferred ketimide ligands is tert-Bu2C. The organometallic complex preferably also contains a cyclic ligand which forms a delocalized pi-bond with the metal [such as a cyclopentadienyl(Cp)-type ligand]. A preferred catalyst is: (tert-Bu2C:N)TiCl2Cp. Preferred organometallic complexes may be activated with a so-called "substantially noncoordinating anion" [for example B(C6F5)4] to form a low cost cocatalyst system which is excellent for the preparation of olefin copolymers having both high mol. weight and very

low
 d.

OSC.G 39 THERE ARE 39 CAPLUS RECORDS THAT CITE THIS RECORD (47 CITINGS)
 RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1999:61165 CAPLUS
 DN 130:125533
 TI Supported phosphinimine-cyclopentadienyl catalysts for polymerization of olefins
 IN Stephan, Douglas W.; Stewart, Jeff C.; Harrison, Daryll G.
 PA Nova Chemicals (International) S.A., Switz.
 SO Eur. Pat. Appl., 21 pp.
 CODEN: EPXXDW
 DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 890581	A1	19990113	EP 1998-305352	19980706 <--
	EP 890581	B1	20030326		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2210131	C	19990109	CA 1997-2210131	19970709 <--
	CA 2210131	A1	19990109		
	US 5965677	A	19991012	US 1997-959589	19971029 <--
	FI 9801404	A	19990110	FI 1998-1404	19980617 <--
	AU 9871920	A	19990121	AU 1998-71920	19980617 <--
	AU 740558	B2	20011108		
	AT 235518	T	20030415	AT 1998-305352	19980706 <--
	ES 2196493	T3	20031216	ES 1998-305352	19980706 <--
	NO 9803151	A	19990111	NO 1998-3151	19980708 <--
	NO 324681	B1	20071203		
	JP 11071420	A	19990316	JP 1998-192881	19980708 <--
	JP 4237298	B2	20090311		
	BR 9802353	A	19991214	BR 1998-2353	19980708 <--
	RU 2203908	C2	20030510	RU 1998-113411	19980708 <--
	CN 1206015	A	19990127	CN 1998-115968	19980709 <--
	CN 1222548	C	20051012		
	IN 2004KO00561	A	20070105	IN 2004-KO561	20040913
PRAI	CA 1997-2210131	A	19970709		
	IN 1998-CA1071	A3	19980616		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 130:125533

AB The catalyst component, especially useful in slurry or gas-phase olefin polymerization, comprises an organometallic complex of a Group 4 metal having a cyclopentadienyl ligand and a phosphinimine ligand, and a particulate support. The catalyst component forms an excellent catalyst system when combined with an activator such as an aluminoxane or a substantially non-coordinating anion. Thus, gas-phase polymerization of 1-butene and ethylene using silica-supported aluminoxanes and cyclopentadienyl titanium[(tri(tert-butyl)phosphinimine)]-(2,6-diisopropylphenoxy)chloride as catalysts gave polymers with Mw 362,000, and Mw/Mn 3.4.

OSC.G 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)

```
=> s 15 and Group 5
    1888950 GROUP
    7093779 5
    4921 GROUP 5
      (GROUP(W)5)
L8      0 L5 AND GROUP 5
```

```
=> s 15 and Group 6
    1888950 GROUP
    4345790 6
    3888 GROUP 6
      (GROUP(W)6)
L9      0 L5 AND GROUP 6
```

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=> s 15 and titanium
    584677 TITANIUM
L10     29 L5 AND TITANIUM
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=> d 1-29 bib abs
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L10 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2008:1501022 CAPLUS
 DN 150:35809
 TI Hydrocarbyl phosphinimine/cyclopentadienyl complexes of group 4 and their
 use in olefin polymerization
 IN Von Haken Spence, Rupert Edward; Stephan, Douglas W.; Brown, Stephen John;
 Jeremic, Dusan; Wurz, Ryan Paul
 PA Nova Chemicals Corporation, Can.
 SO Can., 79pp.
 CODEN: CAXXA4
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2282070	C	20081209	CA 1999-2282070	19990910 <--
	CA 2282070	A1	20010310		
	WO 2001019512	A1	20010322	WO 2000-CA978	20000824 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BG, BR, BY, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IN, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MX, NO, NZ, PL, PT, RO, RU, SD, SG, SI, SK, TJ, TM, TR, UA, US, UZ, VN, YU, ZA, ZW, MD				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1214146	A1	20020619	EP 2000-954231	20000824 <--
	EP 1214146	B1	20031015		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	BR 2000013870	A	20020723	BR 2000-13870	20000824 <--
	JP 2003509388	T	20030311	JP 2001-523129	20000824 <--
	AT 251945	T	20031115	AT 2000-954231	20000824 <--
	ES 2208398	T3	20040616	ES 2000-954231	20000824 <--
	US 6440890	B1	20020827	US 2000-656126	20000906 <--
	IN 2002KN00348	A	20060113	IN 2002-KN348	20020313
PRAI	CA 1999-2282070	A	19990910		
	WO 2000-CA978	W	20000824		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB Group 4 organometallic complexes are characterized by having a phosphinimine ligand and two or more cyclopentadienyl ligands. Certain of these complexes exhibit unusual behavior when examined by NMR techniques. Well defined crystals of the inventive complexes have been isolated and analyzed by x-ray crystallog. The complexes have also been found to be polymerization catalysts which are surprisingly more active than their simple metallocene analogs. Thus, CpTi(NP-t-Bu3)Cl2 0.5000 g and Li(indenyl) 0.366 g were reacted to give a catalyst Cp(indenyl)2Ti(NP-t-Bu3), 2.3 + 10-6 mol/L of which with Ph3CB(c6F4)4 (B/T = 1.00) was used for ethylene polymerization to give 98.7% conversion at 160°.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L10 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2005:183826 CAPLUS
 DN 142:392480
 TI Group IV phosphinimide amide complexes
 AU Hollink, Emily; Wei, Pingrong; Stephan, Douglas W.
 CS Department of Chemistry and Biochemistry, University of Windsor, Windsor, ON, N9B 3P4, Can.
 SO Canadian Journal of Chemistry (2004), 82(11), 1634-1639
 CODEN: CJCHAG; ISSN: 0008-4042
 PB National Research Council of Canada
 DT Journal
 LA English

OS CASREACT 142:392480

AB Complexes of formula $\text{TiCp}(\text{NPR}_3)(\text{NMe}_2)_2$ ($\text{R} = \text{t-Bu}$ 1, Ph 2) were prepared via salt metathesis of $\text{TiCp}(\text{NPR}_3)\text{Cl}_2$ with a slight excess of LiNMe_2 . The species $\text{Ti}(\text{NP-t-Bu}_3)(\text{NMe}_2)_3$ (3) was obtained as a byproduct in the preparation of 1. The related derivative $\text{ZrCp}(\text{NP-t-Bu}_3)(\text{NMe}_2)_2$ (4) was also prepared. Reaction of $\text{TiCp}(\text{NP-t-Bu}_3)\text{Cl}_2$ with $\text{LiNHC}_6\text{H}_3(2,6\text{-i-Pr}_2)$ afforded $\text{TiCp}(\text{NP-t-Bu}_3)(\text{NHC}_6\text{H}_3(2,6\text{-i-Pr}_2))\text{Cl}$ (5) and $\text{Ti}(\text{NP-t-Bu}_3)(\text{NHC}_6\text{H}_3(2,6\text{-i-Pr}_2))_3$ (6). In a similar manner, the Zr analogs $\text{ZrCp}(\text{NP-t-Bu}_3)(\text{NHC}_6\text{H}_3(2,6\text{-i-Pr}_2))\text{Me}$ (7) and $\text{ZrCp}(\text{NP-t-Bu}_3)(\text{NHC}_6\text{H}_3(2,6\text{-i-Pr}_2))_2$ (8) were also prepared. X-ray structural data for compds. 5, 6, and 8 are reported. Reactivity of these phosphinimide-amide derivs. was explored. While these species do not yield imide derivs. upon thermolysis, reaction of 5 with excess AlMe_3 afforded $\text{TiCp}(\text{NP-t-Bu}_3)\text{Me}_2$ while reaction with 1 equivalent of AlMe_3 gave $\text{TiCp}(\text{NP-t-Bu}_3)\text{MeCl}$ (9) and $\text{Al}_2(\text{m-NHC}_6\text{H}_3(2,6\text{-i-Pr}_2))_2\text{Me}_4$ (10). Preliminary crystallog. data are provided for 3, 9, and 10.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:1427 CAPLUS

DN 142:261827

TI Altering molecular weight distributions: Benzylphosphinimide titanium complexes as ethylene polymerization catalysts

AU Hollink, Emily; Wei, Pingrong; Stephan, Douglas W.

CS Department of Chemistry & Biochemistry, University of Windsor, Windsor, ON, N9B 3P4, Can.

SO Canadian Journal of Chemistry (2004), 82(8), 1304-1313

CODEN: CJCHAG; ISSN: 0008-4042

PB National Research Council of Canada

DT Journal

LA English

OS CASREACT 142:261827

AB The phosphines and corresponding phosphinimines $\text{R}_2\text{BnPNSiMe}_3$ ($\text{R} = \text{t-Bu}$, Cy), $\text{p-C}_6\text{H}_4(\text{CH}_2\text{PR}_2)_2$ ($\text{R} = \text{t-Bu}$ (1), Cy (2)), and $\text{p-C}_6\text{H}_4(\text{CH}_2\text{PR}_2\text{NSiMe}_3)_2$ ($\text{R} = \text{t-Bu}$ (3), Cy (4)) were prepared in high yields. Subsequent reaction with Ti precursors afforded $(\text{R}_2\text{BnPN})\text{TiCp}^*\text{Cl}_2$ ($\text{Cp}^* = \eta\text{-C}_5\text{Me}_5$; $\text{R} = \text{t-Bu}$ (5), Cy (6)), $(\text{R}_2\text{BnPN})\text{TiCpCl}_2$ ($\text{Cp} = \eta\text{-C}_5\text{H}_5$; $\text{R} = \text{t-Bu}$ (7), Cy (8)), $\text{p-C}_6\text{H}_4(\text{CH}_2\text{PR}_2\text{NTiCp}^*\text{Cl}_2)_2$ ($\text{R} = \text{t-Bu}$ (9), Cy (10)), and $\text{p-C}_6\text{H}_4(\text{CH}_2\text{PR}_2\text{NTiCpCl}_2)_2$ ($\text{R} = \text{t-Bu}$ (11), Cy (12)). Methylation of the above complexes gave $(\text{R}_2\text{BnPN})\text{TiCp}^*\text{Me}_2$ ($\text{R} = \text{t-Bu}$ (13), Cy (14)), $(\text{R}_2\text{BnPN})\text{TiCpMe}_2$ ($\text{R} = \text{t-Bu}$ (15), Cy (16)), $\text{p-C}_6\text{H}_4(\text{CH}_2\text{PR}_2\text{NTiCp}^*\text{Me}_2)_2$ ($\text{R} = \text{t-Bu}$ (17), Cy (18)), and $\text{p-C}_6\text{H}_4(\text{CH}_2\text{PR}_2\text{NTiCpMe}_2)_2$ ($\text{R} = \text{t-Bu}$ (19), Cy (20)). The activity of these species as catalyst precursors in ethylene polymerization catalysis was evaluated using Schlenk line and Buchi reactor techniques using activation by methylaluminoxane (MAO) or $[\text{Ph}_3\text{C}][\text{B}(\text{C}_6\text{F}_5)_4]$. All these catalysts showed good activities and yield polymers with relatively broad mol. weight distributions. The bimodal polymers derived from catalysts generated using MAO are proposed to result from addnl. active species, possibly as a result of reaction of MAO with the benzylic fragments. X-ray data are reported for 1, 4-8, 10, 12-14, 16, and 18-20.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:918605 CAPLUS

DN 142:135142

TI Preparation method of polyisobutene using phosphine imide-based metallocene compounds

IN Kim, Pil Seong; Lee, Gwan Yeong; Maeng, Il Sang

PA Korea Kumho Petrochemical Co., Ltd., S. Korea
SO Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DT Patent
LA Korean
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	KR 2002006765	A	20020126	KR 2000-40146	20000713 <--
PRAI	KR 2000-40146		20000713		

AB A method for preparing polyisobutene using a phosphine imide-based metallocene compound of group IV is provided, to prepare a polyisobutene with high mol. weight at a rather higher temperature than a very low temperature without using a pollutant halogenated solvent. A polyisobutene is prepared by polymerizing an

isobutene monomer in a nonhalogenated solvent in the presence of a catalyst system comprising a phosphine imide-based metallocene compound represented by $Cp'(R_3PN)MX_2$, a specified boron compound and Me aluminoxane, wherein Cp' is a cyclopentadiene substituted or unsubstituted with an alkyl group of C1-C30; R is an alkyl group of C1-C30; X is an alkyl group of C1-C30, an alkoxide, an aryloxy, an amide or a halide; and n is an integer of 3-40. Preferably the phosphine imide-based metallocene compound is selected from a group consisting of cyclopentadienyltriethylphosphine imide titanium di-Me, cyclopentadienyl tri-tert-butylphosphine imide titanium di-Me and cyclopentadienyltriisopropylphosphine imide titanium dimethyl; the solvent is cyclohexane, hexane or their mixture

L10 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:782322 CAPLUS
DN 142:6857

TI Use of Computational and Synthetic Chemistry in Catalyst Design: A New Family of High-Activity Ethylene Polymerization Catalysts Based on Titanium Tris(amino)phosphinimide Complexes

AU Beddie, Chad; Hollink, Emily; Wei, Pingrong; Gauld, James; Stephan, Douglas W.

CS Department of Chemistry and Biochemistry, University of Windsor, Windsor, ON, N9B3P4, Can.

SO Organometallics (2004), 23(22), 5240-5251
CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 142:6857

AB DFT calcns. of the mechanism of polymerization for the series of catalyst models

derived from $CpTiMe_2(NPR_3)$ ($R = Me, NH_2, H, Cl, F$) demonstrate the critical role of ion pairing in determining the overall barrier to polymerization and suggest

that electron-donating substituents reduce this barrier. Based on these results, a family of precatalysts of general formula $Cp'TiX_2(NP(NR_2)_3)$ ($X = Cl, Me$) were developed. This approach using computational methods to guide the synthetic efforts has afforded a new, readily accessible, and easily varied family of highly active ethylene polymerization catalysts based

on titanium tris(amino)phosphinimide complexes.

OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

RE.CNT 110 THERE ARE 110 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:548478 CAPLUS
 DN 141:243649
 TI C6F5-Group Transfer from [MeB(C6F5)3]- to the Metal Center of L2MMe+ (M = Ti, Zr) as a Deactivation Pathway in Olefin Polymerization Catalysis: A Combined Density Functional Theory and Molecular Mechanics Investigation
 AU Wondimagegn, Tebikie; Xu, Zhitao; Vanka, Kumar; Ziegler, Tom
 CS Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.
 SO Organometallics (2004), 23(16), 3847-3852
 CODEN: ORGND7; ISSN: 0276-7333
 PB American Chemical Society
 DT Journal
 LA English
 AB Rates of pentafluorophenyl group transfer from borate anion to metal center of titanium and zirconium potential catalysts of ethylene polymerization are comparable with the rates of the second insertion of ethylene at temps. above 100°, thus providing a pathway of catalyst deactivation. Activation energies of C6F5-group transfer from the MeB(C6F5)3 counterion were calculated for [CpM(N:PR3)MMe]+, [Cp(N:CR2)MMe]+, [Cp*(N:CR2)MMe]+, [(CpSiMe2NR)MMe]+, [(N:PR3)2MMe]+ and [Cp(OSiR3)MMe]+ (M = Ti, Zr; R = tBu), being in the range of 17-29 kcal/mol for Ti complexes and of 6-11 kcal/mol for zirconium counterparts. Enthalpies of the reaction, calculated on the basis of optimized geometries of the products, [Cp(L)M(C6F5)Me]-MeB(C6F5)2, are in the range of -4 to -10 kcal/mol. This reaction, which produces L2MMe(C6F5) and MeB(C6F5)2, is a possible deactivation pathway in metal-catalyzed single-site olefin polymerization
 With M = Ti and Zr, the results show that aryl group transfer is more facile for zirconium catalysts than for the corresponding titanium systems. Furthermore, electron-donating ligands and sterically demanding substituents play a crucial role in preventing the aryl transfer reaction. The aryl group transfer is likely to take place for (Cp)(NCR2)MMe+ with both titanium- and zirconium-ketimide complexes at about 100°. However, the decomposition temperature is raised to 250° for the corresponding (η5-C5Me5)(NCR2)TiMe+ system.
 OSC.G 25 THERE ARE 25 CAPLUS RECORDS THAT CITE THIS RECORD (25 CITINGS)
 RE.CNT 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2004:432152 CAPLUS
 DN 141:140550
 TI Reduction of Titanium(IV)-Phosphinimide Complexes: Routes to Ti(III) Dimers, Ti(IV)-Metallacycles, and Ti(II) Species
 AU Graham, Todd W.; Kickham, James; Courtenay, Silke; Wei, Pingrong; Stephan, Douglas W.
 CS Chemistry and Biochemistry, University of Windsor, Windsor, ON, N9B 3P4, Can.
 SO Organometallics (2004), 23(13), 3309-3318
 CODEN: ORGND7; ISSN: 0276-7333
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 141:140550
 AB The redox chemical of phosphinimide-containing group IV metal complexes has been investigated. Reaction of the simple phosphinimide species CpTi(NPR3)Cl2 (R = Me 1, i-Pr 2) with Mg affords complexes formulated as [CpTiCl(μ-NPR3)]2 (R = Me 3, i-Pr 4). In contrast, CpTi(NPt-Bu3)Cl2 (5) is reduced by Mg to a putative Ti(II) species that can be intercepted by a variety of reagents including 2,3-dimethyl-1,3-butadiene, diphenylacetylene, phenylacetylene, bis(trimethylsilyl)acetylene,

ethylene, and propylene to give monometallic metallacyclic complexes. In this fashion, the Ti(IV) metallacycles $\text{CpTi}(\text{NPt-Bu3})(\text{CH}_2\text{C}(\text{Me})\text{C}(\text{Me})\text{CH}_2)$, 6, $\text{CpTi}(\text{NPt-Bu3})(\text{CPh})_4$, 7, $\text{CpTi}(\text{NPt-Bu3})(\text{C}(\text{Ph})\text{CHC}(\text{Ph})\text{CH})$, 8, $\text{CpTi}(\text{NPt-Bu3})(\eta^2\text{-C}_2(\text{SiMe}_3)_2)$, 9, $\text{CpTi}(\text{NPt-Bu3})(\text{CH}_2)_4$, 10, $\text{CpTi}(\text{NPt-Bu3})(\text{CH}_2\text{CHMe})_2$, 15, and $\text{CpTi}(\text{NPt-Bu3})(\text{CH}_2)_2(\text{CPh})_2$, 16, were prepared. Related intramol. formation of metalacycle complexes was achieved upon reduction of $\text{Cp}'\text{Ti}(\text{t-Bu}_2(2\text{-C}_6\text{H}_4\text{Ph})\text{PN})\text{Cl}_2$ ($\text{Cp}' = \text{Cp}$ 18, Cp^* 19). The products $[\text{Cp}'\text{Ti}(\text{NPtBu}_2)(2\text{-C}_6\text{H}_4\text{Ph})]$ ($\text{Cp}' = \text{Cp}$ 20, Cp^* 21) contained η^6 -interactions between Ti and the 2-Ph substituent of the biphenyl unit. While Ti(II)-phosphinimide complexes have proven difficult to handle due to their reactivity, an unequivocal example of a Ti(II) species was obtained via reduction of $\text{Cp}^*\text{Ti}(\text{NPt-Bu3})\text{Cl}_2$ (11) with Mg in the presence of CO, affording the species $\text{Cp}^*\text{Ti}(\text{NPt-Bu3})(\text{CO})_2$ (22). X-ray data for 4, 6, 7, 9, 10, 15, and 17-22 are reported.

OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)
 RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:396150 CAPLUS

DN 141:123425

TI Enantiomerically pure amines as substrates for the Ti-catalyzed hydroamination of alkynes

AU Pohlki, Frauke; Bytschkov, Igor; Siebeneicher, Holger; Heutling, Andreas; Koenig, Wilfried A.; Doye, Sven

CS Organisch-Chemisches Institut, Universitaet Heidelberg, Heidelberg, 69120, Germany

SO European Journal of Organic Chemistry (2004), (9), 1967-1972
 CODEN: EJOCFK; ISSN: 1434-193X

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

OS CASREACT 141:123425

AB For two representative reactions employing enantiomerically pure (S)-1-phenylethylamine and (S)-1-cyclohexylethyl-amine it is shown that Ti-catalyzed hydroamination reactions of alkynes do not generally take place without partial racemization at the chiral center adjacent to the nitrogen atom. However, identified from a selection of nine Ti catalysts, dimethylbis[(1,2,3,4,5- η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]titanium ($\text{Cp}^*_2\text{TiMe}_2$) and at least two other catalysts can be used for racemization-free hydroamination reactions of alkynes. Furthermore, the amount of racemization can be reduced significantly by the addition of pyridine to the reaction mixture

OSC.G 31 THERE ARE 31 CAPLUS RECORDS THAT CITE THIS RECORD (31 CITINGS)

RE.CNT 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:314366 CAPLUS

DN 141:23660

TI Isolation and Characterization of a Monomeric Cationic Titanium Hydride

AU Ma, Kuangbiao; Piers, Warren E.; Gao, Yuan; Parvez, Masood

CS Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SO Journal of the American Chemical Society (2004), 126(18), 5668-5669

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

OS CASREACT 141:23660

AB $[\text{CpMeTi}(\text{N:PtBu}_3)][\text{B}(\text{C}_6\text{F}_5)_4]$ (1-Cp) and $[\text{Cp}^*\text{MeTi}(\text{N:PtBu}_3)][\text{B}(\text{C}_6\text{F}_5)_4]$

(1-Cp*), stabilized by the tri-tert-butylphosphinimine ligand and either C₅H₅ or C₅Me₅, were generated from the neutral di-Me precursors and [Ph₃C]⁺[B(C₆F₅)₄]⁻. Reaction of these compds. with H₂ resulted in contrasting reactions. For 1-Cp, hydrogenolysis of the Ti-CH₃ group led to rapid reduction to Ti(III) and production of a cationic Ti(III) dimer, [CpTi(μ-η¹-N:PtBu₃)]₂[B(C₆F₅)₄]₂ (2), presumably formed upon loss of H₂ from a transiently generated Ti(IV) hydride. Compound 2 was characterized crystallog. and via its cleavage with donor solvents such as THF to form the monomeric [Cp(tBu₃P:N)Ti(THF)₂]⁺[B(C₆F₅)₄]⁻, 3. In contrast, 1-Cp* reacted rapidly with H₂ to form a cationic Ti(IV) hydride species, [(C₅Me₅)Ti(N:PtBu₃)H][B(C₆F₅)₄] (4), which was resistant to reduction. While only moderately stable in solution under H₂, a stable, isolable THF adduct precipitated upon addition of THF, giving [(C₅Me₅)Ti(N:PtBu₃)(THF)H][B(C₆F₅)₄], which was fully characterized, including via x-ray crystallog. Naked hydride 4 was very reactive toward haloarene solvents such as bromobenzene, giving the cationic bromide [Cp*(tBu₃P:N)TiBr][B(C₆F₅)₄], 5, which was fully characterized as [(C₅Me₅)Ti(N:PtBu₃)(THF)Br][B(C₆F₅)₄]. The contrasting behavior of 1-Cp and 1-Cp* is a result of the greater steric protection and electron donation provided by the Cp* ligand relative to the Cp donor.

OSC.G 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
 RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:638408 CAPLUS

DN 140:17002

TI A density functional study of ethylene insertion into the M-methyl (M = Ti, Zr) bond for different catalysts, with a QM/MM model for the counterion, B(C₆F₅)₃CH₃-

AU Vanka, Kumar; Xu, Zhitao; Ziegler, Tom

CS Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SO Israel Journal of Chemistry (2003), Volume Date 2002, 42(4), 403-415

CODEN: ISJCAT; ISSN: 0021-2148

PB Laser Pages Publishing

DT Journal

LA English

AB Single site homogeneous catalysts have been studied extensively in recent years as alternatives to traditional heterogeneous catalysts. The current theor. study uses d. functional theory to study the insertion process of the ethylene monomer into the titanium-carbon chain for contact ion-pair systems of the type [L₁L₂TiCH₃-μ-CH₃-B(C₆F₅)₃], where L₁, L₂, are Cp, NPH₃, and other ligands. Different modes of approach cis and trans to the μ-CH₃ bridge were considered. The counterion, B(C₆F₅)₃CH₃-, was modeled by QM/MM methods. The value of ΔH_{tot}-the total barrier to insertion-was found to be pos. (in the range of 4-15 kcal/mol). The ability of the ancillary ligands, L₁ and L₂, to stabilize the ion-pair was found to be an important factor in determining the value of ΔH_{tot}. On replacing the titanium metal center with zirconium, the ΔH_{tot} values were found to be lowered (in the range of 2-9 kcal/mol), indicating that they would be better catalysts than their titanium analogs. The size of the ligands L₁ and L₂ was increased by replacing hydrogens in the ligands with tert-Bu groups. The value of ΔH_{tot} was found to increase (in the range of 10-28 kcal/mol) in contrast to the simple systems, for both the cis and trans cases of approach, with the cis mode of approach giving lower values of ΔH_{tot}. Solvent effects were incorporated with cyclohexane (ε = 2.023) as the solvent, and were found to have a minor influence, ±(0.5-1.5) kcal/mol on the insertion barrier for all the cases studied.

OSC.G 8 THERE ARE 8 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2003:376364 CAPLUS
DN 138:369384
TI Halosulfonic acid treated catalyst support for olefin polymerization
IN Gao, Xiaoliang; Chisholm, P. Scott; Kowalchuk, Matthew Gerald; Donaldson, Robert D.
PA Nova Chemicals (International) S.A., Switz.
SO U.S. Pat. Appl. Publ., 12 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20030092563	A1	20030515	US 2002-72375	20020207 <--
	US 6730755	B2	20040504		
	CA 2334049	A1	20020802	CA 2001-2334049	20010202 <--
	WO 2003068829	A1	20030821	WO 2002-CA156	20020211 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002231524	A1	20030904	AU 2002-231524	20020211 <--
	BR 2002006842	A	20040225	BR 2002-6842	20020211 <--
	CN 1524094	A	20040825	CN 2002-808067	20020211 <--
	CN 1273500	C	20060906		
	EP 1472294	A1	20041103	EP 2002-711709	20020211 <--
	EP 1472294	B1	20050803		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2005517747	T	20050616	JP 2003-567955	20020211
	JP 4276081	B2	20090610		
	AT 301142	T	20050815	AT 2002-711709	20020211
	ES 2247305	T3	20060301	ES 2002-711709	20020211
	IN 2003KN00914	A	20050708	IN 2003-KN914	20030716
	KR 800219	B1	20080201	KR 2003-710191	20030801
PRAI	CA 2001-2334049	A	20010202		
	WO 2002-CA156	A	20020211		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A supported catalyst for olefin polymerization comprises a combination of a novel metal oxide support and an activator which is an aluminoxane or a boron activator. The novel metal oxide support of this invention is a conventional particulate metal oxide support material (such as silica or alumina) which has been treated with a halosulfonic acid. A catalyst system which contains this novel catalyst support and a transition metal catalyst is highly active for olefin polymerization (in comparison to prior art catalyst systems which use a conventional metal oxide support).

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:254930 CAPLUS
 DN 138:401847
 TI An Approach to Catalyst Design: Cyclopentadienyl-Titanium
 Phosphinimide Complexes in Ethylene Polymerization
 AU Stephan, Douglas W.; Stewart, Jeffrey C.; Guerin, Frederic; Courtenay,
 Silke; Kickham, James; Hollink, Emily; Beddie, Chad; Hoskin, Aaron;
 Graham, Todd; Wei, Pingrong; Spence, Rupert E. v. H.; Xu, Wei; Koch,
 Linda; Gao, Xiaoliang; Harrison, Daryll G.
 CS School of Physical Sciences, Chemistry and Biochemistry, University of
 Windsor, Windsor, ON, N9B 3P, Can.
 SO Organometallics (2003), 22(9), 1937-1947
 CODEN: ORGND7; ISSN: 0276-7333
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 138:401847
 AB A strategy for polymerization catalyst design has been developed based on the
 steric and electronic analogy of bulky phosphinimides to cyclopentadienyl
 ligands. The family of complexes of the form (Cp')TiCl₂(N:PR₃) (Cp' =
 η^5 -C₅H₅, η^5 -Me₃SiC₅H₄, η^5 -C₅Me₅, η^5 -indenyl,
 η^5 -tBuC₅H₄, η^5 -BuC₅H₄, η^5 -Ph₄C₅H; R = alkyl or aryl) was
 prepared and characterized. Alkyl and aryl derivs. (Cp')TiR₂(N:PR₃),
 (Cp')TiAr₂(N:PR₃) were also prepared, and were evaluated for use as catalyst
 precursors in olefin polymerization The polymerization of ethylene was
 examined employing
 several types of cocatalyst activators. Trends and patterns in the
 structure-activity relationship are discussed, and the implications for
 catalyst design are evaluated.
 OSC.G 62 THERE ARE 62 CAPLUS RECORDS THAT CITE THIS RECORD (64 CITINGS)
 RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2002:888784 CAPLUS
 DN 137:370811
 TI Solution polymerization process process for preparing
 ethylene- α -olefin copolymer with broad molecular weight distribution
 IN Brown, Stephen John; Swabey, William John; Dobbin, Christopher John Brooke
 PA Nova Chemicals (International) S.A., Switz.
 SO PCT Int. Appl., 22 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002092649	A2	20021121	WO 2002-CA558	20020423 <--
	WO 2002092649	A3	20030116		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2347410	A1	20021111	CA 2001-2347410	20010511 <--
	US 20030004288	A1	20030102	US 2002-124465	20020417 <--
	US 6777509	B2	20040817		
	AU 2002311115	A1	20021125	AU 2002-311115	20020423 <--
PRAI	CA 2001-2347410	A	20010511		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 137:370811

AB The process comprises polymerizing ethylene and ≥ 1 C3-40 α -olefin (e.g., 1-octene) under medium pressure solution polymerization conditions at 170-300° in the presence of a catalyst system comprising (1) an organometallic catalyst containing a group 4 metal, ≥ 1 phosphinimine ligand and ≥ 1 activatable ligand [e.g., cyclopentadienyl titanium (tri-tert-butylphosphinimine) dichloride]; (2) a four coordinate boron activator (e.g., trityl borate); and (3) ≥ 1 trialkylaluminum (e.g., trimethylaluminum) to form a copolymer with mol. weight distribution > 2.0 . The polyethylene product produced by the process is desirable because it can provide enhanced "processability" in comparison to polyethylene having a narrow mol. weight distribution.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:361420 CAPLUS

DN 137:169591

TI Titanium complexes as catalyst for the intermolecular hydroamination of alkynes

AU Pohlki, Frauke; Heutling, Andreas; Bytschkov, Igor; Hotopp, Torsten; Doye, Sven

CS Institut fur Organische Chemie, Universitat Hannover, Hannover, 30167, Germany

SO Synlett (2002), (5), 799-801

CODEN: SYNLES; ISSN: 0936-5214

PB Georg Thieme Verlag

DT Journal

LA English

OS CASREACT 137:169591

AB Several titanium complexes can be used as active catalysts for the intermol. hydroamination of alkynes. The investigated catalysts include various titanocene complexes as well as titanium compds. bearing amido- and chloro-ligands. The activities of the investigated catalysts are compared in two representative hydroamination/reduction sequences. Thus, $\text{Cp}_2\text{Ti}(\text{:NBu-t})(\text{Py})$ catalyzed hydroamination of diphenylacetylene with t-butylamine in PhMe followed by reduction with $\text{NaBH}_3\text{CN}/\text{ZnCl}_2$ in MeOH gave 98% $\text{PhCH}_2\text{CH}(\text{NHBu-t})\text{Ph}$.

OSC.G 35 THERE ARE 35 CAPLUS RECORDS THAT CITE THIS RECORD (35 CITINGS)

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2002:212090 CAPLUS

DN 136:386216

TI Synthesis, Structure, and Reactivity of Titanium Phosphinimide Thiolate Complexes

AU Ong, Chris; Kickham, James; Clemens, Steve; Guerin, Fred; Stephan, Douglas W.

CS School of Physical Sciences, Chemistry and Biochemistry, University of Windsor, Windsor, ON, N9B 3P4, Can.

SO Organometallics (2002), 21(8), 1646-1653

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 136:386216

AB A series of titanium-phosphinimide thiolate complexes were prepared employing either thiolate for chloride metathesis or protonolysis

of metal-carbon bonds by thiols. In these ways the following species were obtained: $\text{CpTi}(\text{NPr}'_3)(\text{SR})_2$ ($\text{R}' = \text{i-Pr}$, $\text{R} = \text{CH}_2\text{Ph}$ 3; Ph 4, t-Bu 5, $(\text{SR})_2 = \text{S}_2(\text{CH}_2)_2$ 6, $\text{S}_2(\text{CH}_2)_3$ 7, $\text{S}_2(\text{CH}_2)_2\text{C}_6\text{H}_4$ 8; $\text{R}' = \text{t-Bu}$, $\text{R} = \text{CH}_2\text{Ph}$ 9; Ph 10, t-Bu 11); $\text{Cp}(\text{t-Bu}_3\text{PN})\text{TiMe}(\text{SPh})$ 12; and $(\text{t-Bu}_3\text{PN})_2\text{Ti}(\text{SR})_2$ ($\text{R} = \text{CH}_2\text{Ph}$ 14; Ph 15, t-Bu 16). Reactions of $(\text{t-Bu}_3\text{PN})_2\text{TiMe}_2$ with 1 equivalent of HSCH_2Ph gave a cyclometalated species 17, $(\text{t-Bu}_3\text{PN})_2\text{Ti}(\eta^2\text{-SCHPh})$. The analogous reaction of 1 equivalent of phenylthiol generated the species $(\text{t-Bu}_3\text{PN})_2\text{Ti}(\text{Me})(\text{SPh})$ 18. While 17 and 18 could not be isolated free of 14 and 15, resp., the analogous reaction of tert-butylthiol afforded $(\text{t-Bu}_3\text{PN})_2\text{Ti}(\text{Me})(\text{St-Bu})$ 19 cleanly. Attempts to effect sulfur insertion into Ti-Me bonds were undertaken via the reaction of $(\text{t-Bu}_3\text{PN})_2\text{TiMe}_2$ with S_8 but gave instead the species $(\text{t-Bu}_3\text{PN})_2\text{Ti}(\eta^2\text{-S}_5)$ 20. The reactivity of the thiolate derivs., 3-5 with excess AlMe_3 , was examined. Spectroscopic and crystallog. studies revealed the formation of $(\text{CpTi}(\mu\text{-SR})(\mu\text{-NPr}_3)(\text{C})(\text{AlMe}_2)_2(\mu\text{-SR}))\text{AlMe}$ ($\text{R} = \text{CH}_2\text{Ph}$ 21, Ph 22, t-Bu 23). Analogous reactions of 7 and 8 with AlMe_3 afforded $[\text{Cp}(\text{i-Pr}_3\text{PN})\text{Ti}(\text{SRS})] \cdot (\text{AlMe}_3)_3$ ($\text{R} = (\text{CH}_2)_3$ 24, $((\text{CH}_2)_2(\text{C}_6\text{H}_4))$ 25). The mechanistic implications of the observed multiple C-H bond activation are considered. Crystallog. studies of 4, 6, 7, 14, 16, and 20-23 are reported.

OSC.G 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
 RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2002:175969 CAPLUS
 DN 137:63506
 TI A highly efficient titanium-based olefin polymerization catalyst with a monoanionic iminoimidazolidide π -donor ancillary ligand
 AU Kretschmer, Winfried P.; Dijkhuis, Chris; Meetsma, Auke; Hessen, Bart; Teuben, Jan H.
 CS Dutch Polymer Institute/Centre for Catalytic Olefin Polymerisation, Stratingh Institute of Chemistry and Chemical Engineering, University of Groningen, Groningen, 9747 AG, Neth.
 SO Chemical Communications (Cambridge, United Kingdom) (2002), (6), 608-609
 CODEN: CHCOFS; ISSN: 1359-7345
 PB Royal Society of Chemistry
 DT Journal
 LA English
 AB The titanium complex $\text{Cp}[1,3-(2',6'\text{-Me}_2\text{C}_6\text{H}_3)_2(\text{CH}_2\text{N})_2\text{C:N}]\text{Ti}(\text{CH}_2\text{Ph})_2$, with a monoanionic η^1 -iminoimidazolidide ancillary ligand, is shown to be a highly efficient catalyst for olefin polymerization when activated with the Lewis acid $\text{B}(\text{C}_6\text{F}_5)_3$.

OSC.G 46 THERE ARE 46 CAPLUS RECORDS THAT CITE THIS RECORD (46 CITINGS)
 RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 2001:494863 CAPLUS
 DN 135:227077
 TI η^1 - And η^5 -Indenyl and Cyclopentadienyl Tri-tert-Butylphosphoraneiminatotitanium Complexes
 AU Guerin, Frederic; Beddie, Chad L.; Stephan, Douglas W.; Spence, Rupert E. v. H.; Wurz, Ryan
 CS School of Physical Sciences Chemistry and Biochemistry, University of Windsor, Windsor, ON, N9B 3P4, Can.
 SO Organometallics (2001), 20(16), 3466-3471
 CODEN: ORGND7; ISSN: 0276-7333
 PB American Chemical Society
 DT Journal

LA English
OS CASREACT 135:227077
AB The compds. (indenyl)Ti(NP-t-Bu3)Cl2 (4), Cp2Ti(NP-t-Bu3)Cl (6), (indenyl)2Ti(NP-t-Bu3)Cl (7), Cp(indenyl)Ti(NP-t-Bu3)Cl (8), Cp3Ti(NP-t-Bu3) (9), (indenyl)3Ti(NP-t-Bu3) (10), and Cp(indenyl)2Ti(NP-t-Bu3) (11) are readily derived from reaction with (dme)NaCp or Li(indenyl) with CpTi(NP-t-Bu3)Cl2 (1) or 4 in the appropriate stoichiometry. X-ray crystallog. studies of (indenyl)Ti(NP-t-Bu3)Me2 (5) and 7-11 are reported. In the case of 6 and 9 two cyclopentadienyl rings are bound to the metal in a η^5 -bonding mode, whereas in 7, 8, 10, and 11 one of the cyclopentadienyl or indenyl ligands is bound in an η^5 mode and the remainder in an η^1 -fashion. In the case of 10, temperature-dependent ^1H NMR spectra infer a η^5 - η^1 ligand exchange process with an approx. barrier of 8-9 kcal/mol. Steric crowding appears to be the major factor determining the binding modes of the cyclopentadienyl and indenyl ligands. These structural data result in a view of the phosphoraneiminato ligand as a sterically demanding, four-electron donor ligand.
OSC.G 22 THERE ARE 22 CAPLUS RECORDS THAT CITE THIS RECORD (22 CITINGS)
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2001:423801 CAPLUS
DN 136:232362
TI Multiple C-H bond activation: reactions of titanium -phosphinimide complexes with trimethylaluminum. [Erratum to document cited in CA134:295901]
AU Kickham, James E.; Guerin, Frederic; Stewart, Jeffrey C.; Urbanska, Edyta; Ong, C. M.; Stephan, Douglas W.
CS School of Physical Sciences Chemistry and Biochemistry, University of Windsor, Windsor, ON, N9B 3P4, Can.
SO Organometallics (2001), 20(14), 3209
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
AB The name of C. M. Ong is added as the fifth author.
OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

L10 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2001:298531 CAPLUS
DN 135:92699
TI Phosphinimide-Phosphinimide Ligands: New Bulky Ligands for Ethylene Polymerization Catalysts
AU Yue, Nancy L. S.; Stephan, Douglas W.
CS School of Physical Sciences Chemistry and Biochemistry, University of Windsor, Windsor, ON, N9P 3P4, Can.
SO Organometallics (2001), 20(11), 2303-2308
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
OS CASREACT 135:92699
AB The phosphinimide-phosphines $\text{PPh}_2(\text{NPR}_3)$ (R = i-Pr 1, t-Bu 2) were readily prepared in 80-98% yield. These species react with AlMe_3 or $\text{B}(\text{C}_6\text{F}_5)_3$ to form $\text{Me}_3\text{AlPPh}_2(\text{NPR}_3)$ (R = i-Pr 3, t-Bu 4) and $(\text{C}_6\text{F}_5)_3\text{BPPh}_2(\text{NPr}_3)$ (5), resp. Oxidation of compds. 1 and 2 with Me_3SiN_3 yields $\text{Me}_3\text{SiNPPH}_2(\text{NPR}_3)$ (R = i-Pr 6, t-Bu 7). These species react with CpTiCl_3 to give titanium(IV) complexes $\text{CpTiCl}_2(\text{NPPH}_2)(\text{NPR}_3)$ (R = i-Pr 8, t-Bu 9) and subsequently the alkylated complexes $\text{CpTiMe}_2(\text{NPPH}_2)(\text{NPR}_3)$ (R = i-Pr 10, t-Bu 11). Compds. 8-11 were tested for activity in ethylene polymerization

In the presence of excess methylalumoxane, the species 8 and 9 gave active single-site catalysts, generating 299 and 34 gPE mmol⁻¹ h⁻¹, resp. In contrast, activation of 10 and 11 by [Ph₃C][B(C₆F₅)₄] showed negligible polymerization activity. Reaction of 11 with B(C₆F₅)₃ was shown to give numerous

products, one of which was the dicationic species [CpTi(μ-Cl)(NPPPh₂)(NPt-Bu₃)]₂[B(C₆F₅)₄]₂, 12. The formation of this species and the implications of these results for catalyst and ancillary ligand design are considered and discussed. X-ray crystallog. data are reported for 1, 3, 4, 8, and 12.

OSC.G 36 THERE ARE 36 CAPLUS RECORDS THAT CITE THIS RECORD (36 CITINGS)
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:270898 CAPLUS

DN 135:61410

TI Methane Loss from Cationic μ-Methyl Dimers Formed via Trityl Borate

Activation of Monocyclopentadienyl Ketimide Complexes

Cp[(tBu)₂C:N]Ti(CH₃)₂ (Cp = C₅H₅, C₅Me₅, C₅Me₄SiMe₃)

AU Zhang, Suobo; Piers, Warren E.

CS Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SO Organometallics (2001), 20(10), 2088-2092

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

OS CASREACT 135:61410

AB The reactions of the monocyclopentadienyl titanium di-Me compds. Cp(L)TiMe₂ (L = tBu₂C:N; Cp = C₅H₅, 1a; C₅Me₅, 1b; C₅Me₄SiMe₃, 1c) with the trityl borate activator [Ph₃C][B(C₆F₅)₄]⁻ are described. Formation of μ-Me dimers of formula {[Cp(L)TiMe]₂(μ-Me)}+[B(C₆F₅)₄]⁻ as a 1:1 mixture of rac and meso diastereomers is observed when 0.5 equiv of [Ph₃C][B(C₆F₅)₄]⁻ is employed (-25°, C₆D₅Br; Cp = C₅H₅, rac/meso 2a; C₅Me₅, rac/meso 2b; C₅Me₄SiMe₃, rac/meso 2c). Dynamic NMR and crossover expts. suggest that the dimers 2 are relatively nonlabile with respect to dissociation, intramol. Me group exchange, or diastereomer interconversion. Dimers 2 are observed to undergo methane loss in solution at room temperature, affording the new dimeric compds. 3a-c, {[Cp(L)Ti]₂(μ-CH₂)(μ-CH₃)}+[B(C₆F₅)₄]⁻. For the less sterically demanding C₅H₅ ligand, 3a is formed as a mixture of rac/meso diastereomers (7:3), but for the bulkier C₅Me₅ and C₅Me₄SiMe₃ ligands, the rac isomers of 3b and 3c are formed exclusively. In contrast to μ-Me dimers 2, in which rac/meso interconversion is not observed, the diastereomers of 3 do undergo interchange, as determined by EXSY spectroscopy, and thus the rac/meso ratios observed are thermodyn.

OSC.G 44 THERE ARE 44 CAPLUS RECORDS THAT CITE THIS RECORD (44 CITINGS)

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:208170 CAPLUS

DN 134:237973

TI Hydrocarbyl phosphinimine/cyclopentadienyl complexes of group 4 and their use in olefin polymerization

IN Von Haken Spence, Rupert Edward; Brown, Stephen John; Wurz, Ryan Paul; Jeremic, Dusan; Stephan, Douglas W.

PA Nova Chemicals (International) S.A., Switz.

SO PCT Int. Appl., 81 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001019512	A1	20010322	WO 2000-CA978	20000824 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BG, BR, BY, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IN, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MX, NO, NZ, PL, PT, RO, RU, SD, SG, SI, SK, TJ, TM, TR, UA, US, UZ, VN, YU, ZA, ZW, MD				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2282070	C	20081209	CA 1999-2282070	19990910 <--
	CA 2282070	A1	20010310		
	EP 1214146	A1	20020619	EP 2000-954231	20000824 <--
	EP 1214146	B1	20031015		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	BR 2000013870	A	20020723	BR 2000-13870	20000824 <--
	JP 2003509388	T	20030311	JP 2001-523129	20000824 <--
	AT 251945	T	20031115	AT 2000-954231	20000824 <--
	IN 2002KN00348	A	20060113	IN 2002-KN348	20020313
PRAI	CA 1999-2282070	A	19990910		
	WO 2000-CA978	W	20000824		

OS MARPAT 134:237973

AB Group IV organometallic complexes having a phosphinimine ligand and ≥ 2 cyclopentadienyl ligands are characterized, which are polymerization catalysts more active than their simple metallocene analogs. Thus, CpTi(NP-t-Bu₃)Cl₂ 0.5000 g and Li(indenyl) 0.366 g were reacted to give a catalyst Cp(indenyl)2Ti(NP-t-Bu₃), 2.3X10⁻⁶ mol/L of which with Ph3CB(c6F4)₄ (B/T=1.00) was used for ethylene polymerization to give 98.7% conversion at 160°.

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2001:169012 CAPLUS

DN 135:46261

TI The reactivity of trimethylsilyliminophosphines towards titanium and zirconium halides

AU Sarsfield, Mark J.; Said, Musa; Thornton-Pett, Mark; Gerrard, Lee A.; Bochmann, Manfred

CS School of Chemistry, University of Leeds, Leeds, LS2 9JT, UK

SO Journal of the Chemical Society, Dalton Transactions (2001), (6), 822-827

CODEN: JCSDAA; ISSN: 1472-7773

PB Royal Society of Chemistry

DT Journal

LA English

OS CASREACT 135:46261

AB Zirconium tetrachloride reacted with C₂H₄(Ph₂P:NSiMe₃)₂-1,2 1 under C-H activation to give the NCN chelate complex ZrCl₃{κ³-N,C,N'-C₂H₃(Ph₂P:NSiMe₃)₂}, while the reaction with C₅H₃N(Ph₂P:NSiMe₃)₂-2,6 gave an N-donor adduct. Cp*TiCl₃ reacts with trimethylsilyliminophosphines under dehalosilylation in all cases. In contrast to 1, the potentially C-N chelating benzylphosphinimine (4-ButC₆H₄CH₂)Ph₂P:NSiMe₃ undergoes dehalosilylation with TiCl₄ in preference to C-H activation, while prolonged reflux with ZrCl₄ affords the salt [4-ButC₆H₄CH₂P(Ph)₂NHSiMe₃]₂[Zr₂Cl₁₀]. The mol. structures of the latter, ZrCl₃{C₂H₃(Ph₂PNSiMe₃)₂}, C₅H₃N(Ph₂P:NTiCl₂Cp*)₂-2,6, and TiCl₂Cp*{N:PPh₂CH₂C₆H₄But-4} were determined by x-ray diffraction.

OSC.G 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2001:122633 CAPLUS
DN 134:295901
TI Multiple C-H bond activation: reactions of titanium
-phosphinimide complexes with trimethylaluminum
AU Kickham, James E.; Guerin, Frederic; Stewart, Jeffrey C.; Urbanska, Edyta;
Ong, C. M.; Stephan, Douglas W.
CS School of Physical Sciences Chemistry and Biochemistry, University of
Windsor, Windsor, ON, N9B 3P4, Can.
SO Organometallics (2001), 20(6), 1175-1182
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
OS CASREACT 134:295901
AB Multiple C-H bond activation occurs upon reaction of phosphinimide
complexes of the form $\text{Cp}'(\text{R3PN})\text{TiMe}_2$ ($\text{Cp}' = \text{Cp}$, indenyl; $\text{R} = \text{i-Pr}$, Cy , Ph)
with excess AlMe_3 , affording the carbide complexes
 $\text{Cp}'\text{Ti}(\mu_2\text{-Me})(\mu_2\text{-NPR3})(\mu_4\text{-C})(\text{AlMe}_2)_3$ or in some cases
 $[\text{Cp}'\text{Ti}(\mu_2\text{-Me})(\mu_2\text{-NPR3})(\mu_5\text{-C})(\text{AlMe}_2)_3 \cdot (\text{AlMe}_3)]$. These
species contain four- and five-coordinate carbide centers. VT-NMR studies
established that such species exist in equilibrium. The four-coordinate carbide
complexes retain Lewis acidity at a planar three-coordinate Al center, as
evidenced by the reaction with di-Et ether, THF, or PMe_3 . This affords
species of the form $[\text{Cp}'\text{Ti}(\mu_2\text{-Me})(\mu_2\text{-NPR3})(\mu_4\text{-C})(\text{AlMe}_2)_2(\text{AlMe}_2(\text{L}))]$ ($\text{L} = \text{Et}_2\text{O}$, THF, PMe_3). The Lewis acidity is also
evidenced in the reaction of the carbide complexes with $\text{CpTi}(\text{NPR3})\text{Me}_2$. In
this case, labeling studies affirm Me group exchange processes. The
analogous reactions of $\text{Cp}(\text{R3PN})\text{Ti}(\text{CH}_2\text{SiMe}_3)_2$ or $\text{Cp}^*(\text{R3PN})\text{TiMe}_2$ with AlMe_3
afforded $\text{CpTi}(\mu_2\text{-Me})(\mu_2\text{-NPR3})(\mu_3\text{-CSiMe}_3)(\text{AlMe}_2)_2$ and
 $\text{Cp}^*\text{Ti}(\mu_2\text{-Me})(\mu_2\text{-NPR3})(\mu_3\text{-CH})(\text{AlMe}_2)_2$, resp. These observations
confirm that steric congestion can impinge on the C-H activation process.
The nature of the above products of C-H bond activation was confirmed
employing NMR, isotopic labeling, and crystallog. methods. The
implications of these results with respect to C-H bond activation and
polymerization catalysis are considered.

OSC.G 40 THERE ARE 40 CAPLUS RECORDS THAT CITE THIS RECORD (40 CITINGS)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2000:733758 CAPLUS
DN 134:17560
TI Five-coordinate carbides in Ti-Al-C complexes
AU Kickham, James E.; Guerin, Frederic; Stewart, Jeffrey C.; Stephan, Douglas
W.
CS Sch. Phys. Sci., Chem. Biochem., Univ. Windsor, Windsor, ON, N9B3P4, Can.
SO Angewandte Chemie, International Edition (2000), 39(18),
3263-3266
CODEN: ACIEF5; ISSN: 1433-7851
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
OS CASREACT 134:17560
AB The remarkable process of triple C-H bond activation proceeds directly in
the reactions of the dialkyl complexes $[\text{CpTi}(\text{NPR3})\text{Me}_2]$ with AlMe_3 .
Moreover, the resulting Ti-Al-carbide complexes establish equilibrium with
excess AlMe_3 to provide an unusually facile interconversion between
carbide species with distorted tetrahedral and five-coordinate, pseudo

trigonal bipyramidal geometries: [CpTi(μ 2-Me)(μ 2-NiPr3)(μ 4-C)(μ 2-AlMe2)2(AlMe2)] (3) and [CpTi(μ 2-Me)(μ 2-NiPr3)(μ 5-C)(μ 2-AlMe2)2(AlMe2)(AlMe3)] (2; R = iPr, Ph). The crystal and mol. structures of 2 (R = Ph) and 3 and were determined by x-ray crystallog.

OSC.G 47 THERE ARE 47 CAPLUS RECORDS THAT CITE THIS RECORD (47 CITINGS)
 RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2000:356023 CAPLUS

DN 133:120713

TI The Mechanism of Methane Elimination in B(C6F5)3-Initiated Monocyclopentadienyl-Ketimide Titanium and Related Olefin Polymerization Catalysts

AU Zhang, Suobo; Piers, Warren E.; Gao, Xiaoliang; Parvez, Masood

CS Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SO Journal of the American Chemical Society (2000), 122(23), 5499-5509

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB The preparation of monocyclopentadienyl titanium olefin polymerization catalysts and their activation with B(C6F5)3 were carried out. The complexes Cp[tBu(R)C=N]TiCl2 {Cp = C5H5, R = tBu; Cp = C5Me5, R = tBu; Cp = C5Me4SiMe3, R = tBu; Cp = C5Me5, R = CH2SiMe3; Cp = C5Me5, R = Me} were prepared in 50-92% yield from CpTiCl3 and tBu(R)C=NLi. Analogous di-Me compds. were prepared via methylation of dichlorides using MeMgBr in 89-92% yield. The di-Me compound (L = C5Me5, R = CH(SiMe3)2) was prepared directly from Cp*TiMe3 and tBu[(Me3Si)2CH]C=NH in 40% yield. Dynamic 1H NMR studies showed that the ketimide ligands in the di-Me compds. rotate rapidly about Ti-N on the NMR time scale, with a ΔG_{dbldag} of 9.6(6) kcal mol⁻¹ or less. The mixed alkyl compound Cp*[tBu(R)C=N]Ti(CH3)CH2SiMe3 {R = tBu} was prepared via alkylation of the corresponding Me chloride derivative with BrMgCH2SiMe3. When treated with B(C6F5)3, the di-Me compds. are rapidly converted into the ion pairs {Cp[tBu(R)C=N]TiCH3}+[H3CB(C6F5)3]⁻; the mixed alkyl compound yields the ion pair [Cp*(tBu2C=N)TiCH2SiMe3]+[H3CB(C6F5)3]⁻, exclusively. Multinuclear NMR expts. show that ion pairing is tight in these compds. and that ketimide ligand rotation is occurring with a slightly higher barrier in comparison to the neutral di-Me derivs. Ion pair compds. undergo a decomposition process involving loss of methane and producing the neutral compds. Cp[tBu(R)C=N]Ti(C6F5)[CH2B(C6F5)2]. The x-ray crystal structure of the C5H5, tBu member of the neutral compound series was determined. Active cationic compds. are not regenerated from the neutral compds. in the presence of B(C6F5)3 and thus this reaction is a potential fatal deactivation pathway for these particular ion pairs. Detailed kinetic studies on the decomposition of C5Me5, tBu ion pair compound show the reaction

to

be first order in the compound with activation parameters of ΔH_{dbldag} = 20.6(8) kcal mol⁻¹ and ΔS_{dbldag} = -8.5(10) eu, corresponding to ΔG_{dbldag} of 23.1(8) kcal mol⁻¹. A substantial kinetic isotope effect of $k_{\text{H}}/k_{\text{D}}$ = 9.1(6) was measured for the deuterated analog. Further mechanistic expts., including crossover and examination of alkane elimination from the mixed alkyl ion pair compound point to a σ -bond metathesis mechanism for the production of the neutral compds.

OSC.G 85 THERE ARE 85 CAPLUS RECORDS THAT CITE THIS RECORD (88 CITINGS)

RE.CNT 85 THERE ARE 85 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1999:216950 CAPLUS

DN 130:252798
 TI Catalyst having a ketimide ligand for olefin polymerization
 IN McMeeking, John; Gao, Xiaoliang; von Haken Spence, Rupert Edward; Brown, Stephen John; Jeremic, Dusan
 PA Nova Chemicals (International) S.A., Switz.
 SO PCT Int. Appl., 36 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9914250	A1	19990325	WO 1998-CA839	19980903 <--
	W: AL, AM, AT, AU, AZ, BA, BG, BR, BY, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, JP, KE, KG, KP, KR, KZ, LK, LT, LV, MX, NO, NZ, PL, PT, RO, RU, SD, SG, SI, SK, TJ, TM, TR, UA, US, UZ, VN, YU, ZW, MD				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2215444	C	19990315	CA 1997-2215444	19970915 <--
	CA 2215444	A1	19990315		
	US 6114481	A	20000905	US 1998-140608	19980826 <--
	AU 9889700	A	19990405	AU 1998-89700	19980903 <--
	EP 1021470	A1	20000726	EP 1998-941200	19980903 <--
	EP 1021470	B1	20021204		
	R: AT, BE, DE, DK, ES, FR, GB, IT, NL, SE, FI				
	JP 2001516776	T	20011002	JP 2000-511797	19980903 <--
	JP 4245801	B2	20090402		
	AT 229042	T	20021215	AT 1998-941200	19980903 <--
	ES 2188000	T3	20030616	ES 1998-941200	19980903 <--
	CN 1210312	C	20050713	CN 1998-809072	19980903
	US 6420300	B1	20020716	US 2000-616198	20000714 <--
	IN 2004KO00358	A	20060609	IN 2004-KO358	20040625
PRAI	CA 1997-2215444	A	19970915		
	IN 1998-CA1510	A3	19980824		
	US 1998-140608	A3	19980826		
	WO 1998-CA839	W	19980903		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 130:252798

AB A catalyst system for olefin polymerization comprises an organometallic complex of a group 4 metal having a ketimide ligand. One of the preferred ketimide ligands is tert-Bu₂C. The organometallic complex preferably also contains a cyclic ligand which forms a delocalized pi-bond with the metal [such as a cyclopentadienyl(Cp)-type ligand]. A preferred catalyst is: (tert-Bu₂C:N)TiCl₂Cp. Preferred organometallic complexes may be activated with a so-called "substantially noncoordinating anion" [for example B(C₆F₅)₄] to form a low cost cocatalyst system which is excellent for the preparation of olefin copolymers having both high mol. weight and very low d.

OSC.G 39 THERE ARE 39 CAPLUS RECORDS THAT CITE THIS RECORD (47 CITINGS)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1999:134980 CAPLUS

DN 130:267539

TI Phosphinimides as a Steric Equivalent to Cyclopentadienyl: An Approach to Ethylene Polymerization Catalyst Design

AU Stephan, Douglas W.; Stewart, Jeffrey C.; Guerin, Frederic; Spence, Rupert E. v. H.; Xu, Wei; Harrison, Daryll G.

CS School of Physical Sciences Chemistry and Biochemistry, University of Windsor, Windsor, ON, N9B 3P4, Can.

SO Organometallics (1999), 18(7), 1116-1118
 CODEN: ORGND7; ISSN: 0276-7333
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 130:267539
 AB (Cp.dag.)TiCl₂(NPR₃) (R = cyclohexyl, CHMe₂, CMe₃) and the analogous di-Me
 derivs. (Cp.dag.)TiMe₂(NPR₃) were prepared For example, TiCl₄ was added to
 a solution of cyclopentadiene and heated to 60° for 30 min.
 Me₃SiN:PtBu₃ was then added, producing (tBu₃P:N)TiCl₂Cp (3) in 94% yield.
 MeMgBr was then added to a benzene solution of 3 at room temperature and
 stirred
 for 12 h, yielding (tBu₃P:N)TiMe₂Cp (9) (87%). (9) Was then added to
 B(C₆F₅)₃ in hexane and stirred for 30 min, producing
 [Ti(tBu₃P:N)(Cp)(Me)(MeB(C₆F₅)₃)] (14) in 85% yield. These species in the
 presence of MAO, B(C₆F₅)₃, or [Ph₃C][B(C₆F₅)₄] are active catalysts for
 ethylene polymerization An X-ray crystal structure of 14 (space group P2₁/c,
 Z =
 4, wR₂ = 0.2209) was determined
 OSC.G 131 THERE ARE 131 CAPLUS RECORDS THAT CITE THIS RECORD (132 CITINGS)
 RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1999:61165 CAPLUS
 DN 130:125533
 TI Supported phosphinimine-cyclopentadienyl catalysts for polymerization of
 olefins
 IN Stephan, Douglas W.; Stewart, Jeff C.; Harrison, Daryll G.
 PA Nova Chemicals (International) S.A., Switz.
 SO Eur. Pat. Appl., 21 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 890581	A1	19990113	EP 1998-305352	19980706 <--
	EP 890581	B1	20030326		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2210131	C	19990109	CA 1997-2210131	19970709 <--
	CA 2210131	A1	19990109		
	US 5965677	A	19991012	US 1997-959589	19971029 <--
	FI 9801404	A	19990110	FI 1998-1404	19980617 <--
	AU 9871920	A	19990121	AU 1998-71920	19980617 <--
	AU 740558	B2	20011108		
	AT 235518	T	20030415	AT 1998-305352	19980706 <--
	ES 2196493	T3	20031216	ES 1998-305352	19980706 <--
	NO 9803151	A	19990111	NO 1998-3151	19980708 <--
	NO 324681	B1	20071203		
	JP 11071420	A	19990316	JP 1998-192881	19980708 <--
	JP 4237298	B2	20090311		
	BR 9802353	A	19991214	BR 1998-2353	19980708 <--
	RU 2203908	C2	20030510	RU 1998-113411	19980708 <--
	CN 1206015	A	19990127	CN 1998-115968	19980709 <--
	CN 1222548	C	20051012		
	IN 2004KO00561	A	20070105	IN 2004-KO561	20040913
PRAI	CA 1997-2210131	A	19970709		
	IN 1998-CA1071	A3	19980616		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
 OS MARPAT 130:125533

AB The catalyst component, especially useful in slurry or gas-phase olefin polymerization, comprises an organometallic complex of a Group 4 metal having a cyclopentadienyl ligand and a phosphinimine ligand, and a particulate support. The catalyst component forms an excellent catalyst system when combined with an activator such as an aluminoxane or a substantially non-coordinating anion. Thus, gas-phase polymerization of 1-butene and ethylene using silica-supported aluminoxanes and cyclopentadienyl titanium [(tri(tert-butyl)phosphinimine)]-(2,6-diisopropylphenoxy)chloride as catalysts gave polymers with Mw 362,000, and Mw/Mn 3.4.

OSC.G 27 THERE ARE 27 CAPLUS RECORDS THAT CITE THIS RECORD (27 CITINGS)

L10 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1996:402689 CAPLUS
 DN 125:195882
 OREF 125:36695a,36698a
 TI Studies on some coordination complexes of bis(cyclopentadienyl) titanium(IV) dichloride and bis(cyclopentadienyl)zirconium(IV) dichloride
 AU Pathak, Ashish K.; Mittal, Anuj K.; Shukla, P. R.
 CS Dep. Chem., Univ. Lucknow, Lucknow, 226 007, India
 SO Journal of the Indian Chemical Society (1996), 73(6), 227-232
 CODEN: JICSAH; ISSN: 0019-4522
 PB Indian Chemical Society
 DT Journal
 LA English
 OS CASREACT 125:195882
 AB Bis(cyclopentadienyl)titanium(IV) dichloride and bis(cyclopentadienyl)zirconium(IV) dichloride, when treated with the Schiff bases derived from the condensation of salicylaldehyde with o-aminophenol or o-aminothiophenol in a nonaq. medium, form ionic complexes of the type [Cp₂M(L)]Cl₂, where Cp = η⁵-C₅H₅, M = Ti or Zr, L = salicylidene-o-aminophenol (L'), salicylidene-o-aminothiophenol (L''). The secondary ligand reactions on these complexes resulted in a series of new complexes. In all these reactions the metal-ring bonds do not cleave. All the complexes have been assigned square -pyramidal geometries.

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-31.98	-31.98

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